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Abstract

This study explores the influence of vulnerability on migration intentions within the context of Afghanistan. While it is commonplace to conceptualize migration as being driven by certain economic-related factors, it is reasonable to assume that in an insecure setting like Afghanistan the difference between voluntary and involuntary movement is not easily distinguishable, making it necessary to approach the subject through a spectrum which does not presuppose migration is strictly economic in nature. With this in mind, we consider the issue through the broader lens of household vulnerability, a measure which incorporates a range of socio-economic factors allowing for a more comprehensive analysis. We first construct a profile of household vulnerability through individual indicators of deprivation along four principle dimensions, and then perform a regression analysis estimating the influence on migration intentions. Our results provide clear evidence that vulnerable households have a lower likelihood of concrete plans to migrate. This result supports the suggestion that it is not the "poorest of the poor", or in our case the "most vulnerable of the vulnerable" who aspire to move, indicating households have a realistic understanding of their capabilities taking into consideration the inherent costs and risks associated with cross-border movement.

Keywords: Migration Intentions, Migration Motivations, Vulnerability, Poverty, Afghanistan
JEL Codes: I32, O15

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1. Introduction

This study explores the micro-level determinants of migration in Afghanistan. Contrary to the bulk of academic work which takes a revealed preferences approach and looks exclusively at migration behaviour, our analysis takes into consideration stated preferences utilizing migration intentions. The reasons are two-fold: first, our data allows for a more robust analysis of intentions rather than behaviour and second, migration intentions are not likely plagued by an endogeneity problem as is migration behaviour allowing for causal inference. While there may be instinctive doubt as to whether intentions approximate actual behaviour, a body of literature suggests plans to migrate are in fact a good, albeit imperfect, predictor of future migration behaviour (Gardner et al., 1985; De Jong, 2000; Van Dalen and Henkens, 2008; Creighton, 2013). Nonetheless, our goal is not to argue whether intentions do robustly predict actual migration behaviour, but to investigate the drivers of those intentions in their own right.

The reasons why an individual chooses to migrate are wide-ranging and cut across a broad spectrum of economic, social, cultural and political lines of explanation. Traditionally, movement has been understood to be caused by differences between locales in certain economic-related factors including employment and wages. In an insecure environment much like Afghanistan however, where the line between voluntary and involuntary movement is blurred, it seems sensible to avoid presupposing migration is strictly economic in nature. With this in mind, we consider the issue through the broader lens of household vulnerability, a measure which incorporates a range of socio-economic factors allowing for a more comprehensive analysis.

In our model, vulnerability is the result of two factors: the high uncertainty of a detrimental shock occurring, and the low resilience to cope if that shock happens to materialize. Therefore vulnerability is caused by the combination of exposure to risk (high uncertainty) and lack of entitlements (low resilience). We follow the conceptual framework put forth by Ahmed and Gassmann (2009; 2010) which understands vulnerability in a post-conflict setting to be caused by functioning losses within four principle dimensions: (1) human security; (2) exchange freedom; (3) social capital and (4) access. By classifying losses along these four dimensions, we are able to identify specific indicators within each allowing for measurement.

With this conceptual and practical framework at hand, the research question to be answered is: does vulnerability influence migration intentions, and more specifically which vulnerability-related factors are associated with concrete plans to migrate? The analysis therefore is a two-step process. We first profile household vulnerability using individual indicators of deprivation defined along four dimensions both in a dimensional and multi-dimensional fashion, and then perform a regression analysis estimating the influence on migration intentions.

Afghanistan makes for an interesting case study for any number of reasons, but particularly due to the migration-related trends over the last decade. Prior to the fall of the Taliban in 2001, a substantial portion of the Afghan population resided abroad as refugees, mostly in neighbouring Pakistan and Iran. Since then however, the country has witnessed a massive return from abroad, 5.7 million people in the last 10 years by UNHCR accounts. This is partly due to the perception that support from the international community would foster an era of enhanced security as well as a more robust political and economic environment. While progress has been made in certain aspects of everyday life, overall vulnerability remains stubbornly high. The most recent National Risk and Vulnerability Assessment for Afghanistan (NRVA) published in 2009 estimated some 9 million people, or 36 per cent of the population, living in absolute poverty without the ability to meet his or her basic needs[2]. Add to this picture the current withdrawal of foreign troops from the country and it should come as no surprise that many Afghans, including those who have only recently returned, once again entertain the possibility of moving abroad.

The remainder of this article is structured as follows. We begin by highlighting the theoretical foundation used for understanding the determinants of migration. Section 3 then provides a working definition of vulnerability and an outline of our measurement criteria, as well as an overview of the data and methods utilized. We then go on to present our results in section 4, and section 5 offers concluding remarks.

[2]The national average poverty threshold of 1,255 AFS per person per month used in the NRVA is calculated on the basis of a monetary value of a basket of goods and services an individual needs to sustain a minimum level of material well-being, including the typical cost of attaining 2,100 calories per person per day and of meeting some basic non-food needs.

2. Micro-Level Drivers of Migration

Academic study on the causes of migration has blossomed over the years, helping to paint a more nuanced picture as to why an individual may want and/or decide to move both within and across borders. Traditionally, migration theory has been highly influenced by neo-classical economic thought including the standard push-pull model. The more contemporary new economics of labour migration, however, developed over the last 30 odd years, has made up for some of the inherent limitations embedded within the neo-classical perspective. Incorporating many of the fundamental concepts from the livelihoods approach common in development studies, the new economics of labour migration perspective offers a more comprehensive explanation as to why certain individuals aspire to migrate.

At its most basic, neo-classical migration theory argues that the individual's motivation to migrate is based on a rational cost-benefit calculation where income maximization is the underlying objective (Harris and Todaro, 1970). In effect, migration therefore is determined by a simple expected wage differential between origin and destination, incorporating the probability of an individual to be employed at destination (Todaro, 1969), as well as the probability s/he is deported if crossing borders illegally (Todaro and Maruszko, 1989). In line with the human capital perspective, migration is treated here as an investment in that an individual chooses to move where s/he is most productive and thus able to collect the highest wage based on factors like age, experience, education, skills, and so on (Massey et al., 1993). Thus, the neo-classical model underlines the individual agency of the migration process, even if that agency is in a sense deterministic. What's more, an important implication of this perspective is that migration is inversely related to overall socio-economic development, and the proclivity to migrate should decline as a country moves up the development ladder (De Haas, 2010b).

Corresponding to the neo-classical framework is the push-pull model of migration developed by Lee (1966). Here the cause of migration is believed to be the result of broadly defined "negative" and "positive" factors from the areas of origin and destination respectively, which either push an individual to move away from their location or pull them towards a particular destination. Hence the push-pull model emphasizes the structural environment at both origin and destination of the migration process. Common factors which may push a potential migrant include lack of

employment, famine, conflict, lack of social services and the like. Pull factors on the other hand are in effect just the mirror image of the push factors, making both essentially two sides of the same coin (De Haas, 2010). It is, in fact, for this reason that the push-pull framework is commonly criticized as having little heuristic value and limited explanatory power.

By and large the neo-classical perspective including the push-pull model fails to provide a comprehensive explanation as to which particular factors are significant in motivating the migration process. Both are commonly criticized for over-simplifying heterogeneous migration systems in diverse environments due to the application of unrealistic assumptions including perfect markets, full information and free choice. Moreover, the neo-classical approach stresses individual agency, even if it is a deterministic type of agency, while not giving enough consideration to the structural environment, while the push-pull model does just the opposite. As such this perspective offers too narrow of an explanation as to why some people want and/or ultimately decide to move while others choose to remain (McDowell and Haan, 1997).

In response to the evident limitations of the neo-classical theoretical framework, the new economics of labour migration rests on the assumption that the migration decision is not considered by just the individual, but rather within a larger social context of typically the household or greater family. Migration therefore is driven by a collective effort to not merely maximize income, but also minimize risks to income generation (Stark and Bloom, 1985; Taylor and Dyer, 2009). As such, migration is viewed as a means by which the household is able to increase capital assets, diversify sources of income and provide income insurance in environments characterized by highly imperfect capital and insurance markets. An important implication of the new economics of labour migration is that the “poorest of the poor” are generally restricted from moving given they are unable to assume the costs and risks inherent in leaving one’s home. Moreover in contrast to the neo-classical perspective, overall socio-economic development is likely to lead to increased movement at least in the medium term, creating what some authors have dubbed a “migration hump” due to individuals having both higher capabilities and aspirations to migrate abroad (De Haas, 2010b).

Noticeable in the new economics of labour migration are the conceptual similarities with the livelihoods approach to development. In this framework a livelihood is defined as the capabilities, assets and activities required for a means of living (Carney, 1998). Consequently livelihood strategies are the range of decisions households explicitly make in order to meet unique priorities, which commonly consist of maintaining, securing and improving the living condition of the household. Migration of a household member, especially when considering the expectation of remittance transfers, is one such possible strategy helping to diversify income sources and overcome social, economic and institutional development barriers (De Haas, 2010).

The new economics of labour migration embedded with the livelihoods approach to development allows for a richer explanation of the micro-level motivations of migration. The individual agency of the migration process is taken into account as households explicitly strategize to improve well-being, yet not at the expense of ignoring the importance of the local contextual environment including the structural constraints to development. In fact "it is the complex interaction, rather than opposition, of individual agency and macro structures within an historical context which provides a more useful framework for understanding why people migrate" (Kothari, 2002: 10).

One factor directly linking individual agency and the structural constraints to development is pervasive deprivation. While poverty has long been integrated into the equation concerning why certain individuals may wish to or decide to migrate, more often than not the focus has been exclusively on monetary indicators of poverty like low income. This monetary focus has corresponded to the narrow attention on voluntary forms of labour migration, while disregarding so-called involuntary migration by refugees and asylum-seekers where deprivation may not be solely due to low income. In an environment where any classification in terms of the type of migration is problematic because underlying causes blend, be they economic, political or humanitarian, it is useful to take a broader perspective. With this in mind, De Hass (2009: 2-3) rightly points out, "it is important to emphasize that all migrants face structural constraints and that the degree to which they can exercise agency is fundamentally limited…it is therefore probably more appropriate to conceive of a continuum running from low to high constraints under which migration occurs."

In light of this notion, and taking into consideration the fragile environment characterizing Afghanistan, we choose to inspect the aspirations to migrate based on household vulnerability. To the best of our knowledge the explicit way vulnerability influences migration has not been looked at prior. Still, this seems only a small, logical step stemming from the new economics of labour migration incorporating the livelihoods approach to development. In a context deficient in social protection vulnerable households may apply an informal coping strategy like migration. Still, because migration abroad inherently incorporates high costs and risks, we expect as the new economics of labour migration hypothesizes that the "most vulnerable of the vulnerable" have low capability and therefore realistic aspirations for such cross-border movement.

3. Methodology

Definition and Measures of Vulnerability

In order to explore how migration is related to vulnerability, we first must present a workable definition. The literature on vulnerability stems from the seminal work of authors like Sen (1981; 1999), Chambers (1989) and Jodha (1988), each making an asserted effort to re-conceptualize the notion of poverty as more than the conventional lack of income. However despite the obvious similarities between poverty and vulnerability, the two concepts are not synonymous. While poverty can be thought of as the deprivation of different indicators like income, consumption, health, education and the like, vulnerability is better understood as the uncertainty caused by deprivation across those different indicators. Thus, poverty is a static condition at a moment in time, while vulnerability is a dynamic condition related to the insecurity about the future (Moser, 1998). Typically an individual or household is deemed to be vulnerable if at risk of falling into poverty at some future period. Vulnerability, therefore, is intrinsically related to the risks individuals and households face, and the manifestation of those risks as shocks materialize.

From the outset, we are able to conceptually disaggregate vulnerability into two distinct components: the internal and the external (Chambers, 1989). The internal side of vulnerability pertains to the idiosyncratic risks faced by particular groups of individuals or households due to weak risk management and low coping ability once faced with a shock (Prowse, 2003). Examples of possible factors which cause internal vulnerability include low-income, insufficient

education or lack of an informal network for support. The external side on the other hand concerns the covariate risks, stress and shocks present in the surrounding environment which threaten the livelihood security of all members of a community or whole society. Examples of possible events which cause external vulnerability include a conflict, natural disaster or macro-economic crisis. While the external side is the underlying cause of uncertainty over time, and the internal side reinforces poverty once a shock hits, it is the combination of the two which constitutes vulnerability (Ahmed and Gassmann, 2009).

This breakdown into separate internal and external components, while conceptually helpful, is also practical when attempting to measure vulnerability as it distinguishes it from the more common poverty measurement (Ahmed and Gassmann, 2010). Given the internal component gauges low coping ability, it can be measured by the individual's or household's *lack of entitlements*. The external component on the other hand gauges uncertainty in the environment, and may be measured by the individual's or household's *exposure to risk*. Therefore in sum, it is both the lack of entitlements (internal) and the exposure to risk (external) which creates vulnerability and ultimately influences well-being.

Beyond simply separating into two components, in order to more comprehensively measure vulnerability it is ideal to take a multi-dimensional approach in line with recent efforts of poverty measurement.[3] Here, it proves useful to think of functioning losses individuals and households face categorized by entitlements and capabilities. In a fragile environment like Afghanistan, functioning losses may be put into four broad dimensions: (1) loss in human security; (2) loss in exchange freedom; (3) loss in social capital and (4) loss in access. The first, loss in human security, relates to individual security and well-being over time and incorporates deprivation in income, health, shelter and the like. The second, loss in exchange freedom, includes a shortage in resources able to be consumed or traded as well as the inability to gain additional resources through the labour market. The third, loss in social capital, describes a reduction in the sense of belonging of individuals within a particular network, resulting in less informal sources of support. And the fourth, loss in access, consists of the absence of infrastructure or under-

[3]See for example Bourguignon and Chakravarty (2003); Roelen et al. (2009); Alkire and Santos (2010); Alkire and Foster (2011);Gassmann, Siegel, Vanore and Waidler (2012).

utilization of fundamental social services necessary for a healthy socio-economic environment (Ahmed and Gassmann, 2009: 25-26).

Following the classification of these four dimensions of losses within the two separate components of vulnerability, the next step is to identify specific indicators for measurement. As in any exercise of this nature, the choice of indicators is highly discretionary and dependent on the objectives of the study. Nevertheless, our decision to include certain indicators is determined by the literature as well as how well they capture the idiosyncrasies of the particular context in question, and more practically in consideration of data availability. The final list of indicators used to gauge deprivation and subsequently profile household vulnerability, broken down by dimension and component, is listed in Table 1.

TABLE 1: Indicators by Dimension and Component

Dimension 1: Loss in Human Security
Internal: Lack of Entitlements
Average annual income per capita
Number of income sources
Food security
Savings
External: Exposure to Risk
Frequency of income received
Condition of house
Type of sanitation
Source of water
Reliability of fuel
Dimension 2: Loss in Exchange Freedom
Internal: Lack of Entitlements
Educational attainment of household head
Number of households members available to work
Ownership of house
Ownership of land
Ownership of livestock

External: Exposure to Risk
Number of able-bodied households members employed
Dimension 3: Loss in Social Capital
Internal: Lack of Entitlements
Membership in community organizations
Help from social networks
External: Exposure to Risk
Quality of social networks
Dimension 4: Loss in Access
Internal: Lack of Entitlements
Use of school
Use of health services
Use of financial services

Source: adapted from Ahmed and Gassmann, 2010

Following the identification of indicators, we then follow the "dual cut-off" method developed by Alkire and Foster (2011) which first assigns individual thresholds in order to classify a household as deprived or not for a particular indicator, before applying an overall cut-off for both dimensional and multi-dimensional vulnerability. Regarding thresholds, our choices were largely driven by the literature and in line with Ahmed and Gassmann (2010: 11-12), or by the data itself when no clear threshold exists. For example, the threshold for "average annual income per capita" follows the $1.25/day poverty line developed by Ravallion et al. (2009) and subsequently adopted by the World Bank, while the threshold for "number of able-bodied household members employed" is relative to the particular context and derived by taking the mean estimate of the sample. An exhaustive list of all thresholds used to categorize a household as deprived can be found in Annex 1.

As for both the dimensional and multi-dimensional cut-off which allows us to categorize a household as vulnerable or not, consideration of past exercises of a similar nature but also of the number of indicators within each dimension leads us to ultimately set it at 33 per cent.[4] Hence, a

[4]Alkire and Santos (2010); Alkire and Foster (2011); and Gassmann, Siegel, Vanore and Waidler (2012) all employ a 30 per cent cut-off. Our cut-off strays slightly from this level because in our construction all dimensions

household is considered vulnerable if deprived in over a third of the individual indicators, weighted equally, within that dimension. The formal expression of the dimensional vulnerability index (*DVI*) for dimension *d* is:

$$DVI_d = \frac{1}{n}\sum_{i=1}^{n} DV_{id}$$

$$DV_{id} = 1 \; if \; \sum_{x=1}^{d} w_x I_{ix} > \; k$$

Where *n* represents the number of households; DV_{id} is the binary variable for dimensional vulnerability for house *i* on dimension *d*, taking a value of 1 if the aggregated and weighted indicators in that dimension, $w_x I_{ix}$, is greater than the cut-off, *k* which equals 33 per cent. As noted, each indicator within a dimension is weighted equally and sums up to 1.

When scaling up to the multi-dimensional level by aggregating all indicators across dimensions, the procedure is by-and-large identical. The only essential difference is that dimensions are now weighted equally causing individual indicators to be thus relatively weighted depending on the absolute number of indicators making up each particular dimension.[5] A household deprived in more than a third of individual indicators with varying relative weights across dimensions is characterized as multi-dimensionally vulnerable. Formally:

$$MVI = \frac{1}{n}\sum_{i=1}^{n} OV_i$$

incorporate an absolute number of indicators which are a multiple of 3, making the 33 per cent cut-off more appropriate and straightforward for categorization.

[5]Relatively weighting indicators across dimensions in effect gives more importance to those indicators located within dimensions with a less absolute number of indicators. While equally weighting individual indicators across dimensions does lead to a slightly higher overall MVI score, it does not change in any significant way the later presented findings of the regression analysis indicating the robustness of results.

$$OV_i = 1 \; if \; \sum_{x=1}^{d} w_x I_{ix} > \; k$$

Where n represents the number of households; OV_i is a binary variable for overall vulnerability for house $i$taking a value of 1 if the aggregated and weighted indicators across all dimensions, $w_x I_{ix}$, is greater than the cut-off, k which equals 33 per cent. As stated, each dimension is weighted equally and sums up to 1 while each indicator is given a relative weight dependent on the absolute number of indicators within that dimension.

Lastly, after identifying which households are considered multi-dimensional vulnerable, we go one step further by indicating the degree of vulnerability. Here, we simply assign a multi-dimensionally vulnerable household as either "less vulnerable" if deprived between our original cut-off of 33 per cent and a newly applied 50 per cent cut-off, or "very vulnerable" if surpassing the 50 per cent cut-off. In other words, a multi-dimensionally vulnerable household deprived in up to a half of all indicators, relatively weighted, across dimensions is understood to be less severely vulnerable than those households which are deprived in more than a half of all indicators, relatively weighted, across dimensions.

Sample

The data used in this analysis originates from an Afghanistan household survey collected for the IS Academy "Migration & Development: A World in Motion" project.[6] The data collection in Afghanistan was funded by both the Dutch Ministry of Foreign Affairs and the International Organization for Migration. The survey was developed as a way to explore a diverse set of themes related to the relationship between migration and development processes. A range of separate modules within the survey capture in-depth information of both individuals and households including general socio-economic characteristics, migration histories, future migration plans, return migration, remittances, transnational ties and more.

The data collection took place in April and May of 2011. While a purely random sample was not possible due to the limitations of conducting fieldwork in high-risk areas of Afghanistan,

[6] For more information, see the project homepage: http://mgsog.merit.unu.edu/ISacademie/index.php.

particular attention was paid to capturing the diversity of the population in order to increase the representativeness of the sample. Indeed the five provinces of Kabul, Herat, Balkh, Nangarhar and Kandahar were chosen because of their highly populated urban centres, geographical dispersion and varied profiles of migration. Moreover, within each province a stratification between urban, semi-rural and rural communities was applied as a way to capture different socio-economic groups.[7] These communities were then identified to be eligible for enumeration at random, with 10 classified as urban and 5 each as semi-rural and rural. Additionally the survey process followed a random starting point and fixed interval sampling methodology to increase representativeness within that primary sampling unit.

The overall sample is comprised of a total 14,777 individuals within 2,005 households from 100 communities, with one main respondent answering for all household members. Table 2 illustrates the total number of households with at least one member having concrete plans to migrate abroad, disaggregated by where they are located in terms of district-type. Of all 2,005 households in our sample 349, or 17 per cent, have a member with intentions to migrate. Noticeable, urban households are twice as likely as having a member with migration intentions compared to rural households, with semi-rural households falling in between.

TABLE 2: Migration Intentions

	District Type			
	Urban	Semi-Rural	Rural	**Total**
No	785	424	447	**1,656**
	78.27%	84.80%	89.04%	**82.59%**
Yes	218	76	55	**349**
	21.73%	15.20%	10.96%	**17.41%**

Table 3 presents the descriptive statistics for households in our sample, disaggregated by migration intentions to provide a simple mean difference. First, we see respondents are spread nearly evenly across all five provinces per design, with a statistically significant mean difference between migration intentions in Herat, Balkh and Kandahar. Also by design, the sample is around 2:1 urban relative to semi-rural and rural, with both urban and rural having a statistically

[7] Urban refers to those communities which are the district capital; Semi-rural refers to those communities which share a common border with the district capital; and Rural refers to those communities with no common border with the district capital.

significant mean difference between intentions. Moreover the majority of the sample, nearly 90 per cent, is either Pashtun or Tajik corresponding to the two largest ethnic groups in the country, with all having a statistically significant mean difference. Around 10 per cent of the total sample has a current migrant in the household while 55 per cent report a return migrant as a household member, neither of which show a statistically significantly mean difference regarding migration intentions. And lastly, the average household size is 7 members, also not significantly different across intentions.

TABLE 3: Descriptive Statistics (%)

		Migration Intentions			
		No	Yes	**Total**	p-value
Province					
	Kabul	20.29	18.91	**20.05**	
	Herat	21.20	14.33	**20.00**	***
	Balkh	14.98	43.55	**19.95**	***
	Nangarhar	19.99	20.34	**20.05**	
	Kandahar	23.55	2.87	**19.95**	***
District Type					
	Urban	47.40	62.46	**50.02**	***
	Semi-Rural	24.60	21.78	**24.94**	
	Rural	26.99	15.76	**25.04**	***
Ethnic Group					
	Pashtun	46.98	29.51	**43.94**	***
	Tajik	42.15	50.72	**43.64**	***
	Other	10.87	19.77	**12.42**	***
Migrant HH		9.96	11.75	**10.27**	
Return Migrant HH		53.99	58.74	**54.81**	
Household Size		7.41	7.21	**7.38**	

Significance Levels: ***p<0.01, **p<.05, *p<0.10.

Regression Analysis

Following measurement of household vulnerability within each dimension and across dimensions, we then perform a regression analysis using a probit model to estimate the predicted probability that a household contains an individual with the intention to migrate. The formal expression of the model is:

$$P(M_i = 1 \,|X_i) = \phi\beta_i X_i$$

where M_i indicates the binary dependent variable of household i taking the value of 1 if it contains an individual with concrete plans to migrate, and 0 otherwise; X_i is the binary independent variable indicating treatment based on whether the household is characterized as deprived on an individual indicator, I_x, or vulnerable on a particular dimension, DVI_d, or across all dimensions, MVI; β_i represents the regression parameter to be estimated; and ϕ indicates the cumulative normal distribution function. The models are estimated using robust standard errors and controlled for by province, district type, ethnicity, whether the household has a member who is a current migrant, whether there is a return migrant in the household and household size.

4. Results

This section first illustrates our measurement of household deprivation along each individual indicator, as well as both dimensional and multi-dimensional vulnerability. Finally, the results of the regression analysis are presented.

Measuring Household Deprivation and Vulnerability

Table 4 exhibits the percentage of household deprivation for each indicator, again disaggregated by migration intentions to illustrate the mean difference. Moreover, the results are broken down by dimension and component allowing us to better identify where overall vulnerability originates from within our sample.

TABLE 4: Household Deprivation on each Indicator by Dimension and Component (%)

	Migration Intentions			
	No	Yes	**Total**	p-value
Dimension 1: Loss in Human Security				
Internal: Lack of Entitlements				
Average income per capita less than $1.25/day	20.29	19.48	**20.15**	
Less than 2 income sources	59.42	67.62	**60.85**	***
Problems satisfying food needs once every few months	56.70	50.14	**55.56**	**
No savings	87.08	83.95	**86.53**	
External: Exposure to Risk				
Income received less than 12 months/yr.	4.61	4.58	**4.60**	
Poor condition of house	4.36	5.76	**4.60**	
Poor sanitation	8.64	2.01	**7.48**	***
Unhealthy source of water	13.13	13.47	**13.19**	
Unreliable source of fuel	57.89	37.25	**54.29**	***
Dimension 2: Loss in Exchange Freedom				
Internal: Lack of Entitlements				

Educational attainment of household head below secondary level	67.57	46.42	**63.89**	***
Number of households members available to work below the sample mean, 56%	53.50	47.28	**54.42**	**
No ownership of home	26.75	30.09	**27.33**	
No ownership of land	78.20	84.53	**79.30**	***
No ownership of livestock	52.05	59.03	**53.27**	**
External: Exposure to Risk				
Number of able-bodied households members employed below than sample mean, 40%	35.51	39.26	**36.16**	
Dimension 3: Loss in Social Capital				
Internal: Lack of Entitlements				
No membership in community organizations	36.11	15.47	**32.52**	***
No informal help from social networks	30.17	29.23	**30.00**	
External: Exposure to Risk				
Quality of social networks is low	5.26	6.61	**5.49**	
Dimension 4: Loss in Access				
Internal: Lack of Entitlements				
No use of school	33.81	17.83	**31.09**	***
No use of health services	10.02	8.88	**9.83**	
No use of financial services	92.57	85.39	**91.32**	***

Significance Levels: ***p<0.01, **p<.05, *p<0.10.

By first focusing on the totals column, one of the initial observations is the diversity in deprivation across each dimension. Taking into consideration the prolonged exposure to conflict Afghan households have faced over the years, it is no surprise many are deprived along a broad range of measures gauging an overall standard of living. Deprivation within Dimension 1: Loss in Human Security for example illustrates the impoverished state of households in terms of economic well-being, health and condition of housing. We find that even though only 20 per cent of our sample lives below the internationally recognized poverty line of $1.25/day and 5 per cent receive income less than 12 months over the year, some 61 per cent cannot count on more than two sources of income while 87 per cent do not save. This shows that while absolute poverty is not as pervasive or unstable in comparison to original expectations, the majority of households have little protection in the case of loss of employment. In terms of health, some 56 per cent have trouble satisfying food needs at least every few months, even though only 13 per cent have an unhealthy source of water and 7 per cent poor sanitation based on the type of toilet. Again, even though a relatively low number of households do not have access to safe drinking water or sanitation, more than half are prone to high food insecurity reflecting their exposure to malnutrition. As for the condition of the household, 54 per cent of the sample does not have a reliable source of fuel, despite only 5 per cent having a poor living condition indicated by

flooring. An unreliable source of fuel is particularly detrimental in the winter months, putting those households at risk of extreme weather conditions common to the setting.

Deprivation within Dimension 2: Loss in Exchange Freedom depicts the household's low level of endowment, as well as its inability to build upon that endowment through the labour market in order to strengthen resilience. In terms of assets, 79 per cent of households do not own any land, while 53 per cent have no livestock and 27 per cent do not own a home. In an agricultural-based economy, this high deficiency in land and livestock ownership puts a serious restriction on any agricultural-based production, either for subsistence or trade purposes. As for human capital and labour, a notable 64 per cent of household heads have below secondary level education, while 54 per cent of the sample falls below the sample mean regarding the number of household members available to work and 36 per cent below the sample mean concerning the number of able-bodied members that are actually employed. This illustrates how a disproportionately high number of households, nearly two-thirds, are confined to low-skill labour activities, while more than half have a comparatively low availability of labour to support household earnings and more than a third under-utilize that available labour relative to the rest of the sample.

Deprivation within Dimension 3: Loss in Social Capital describes the low level of belonging and thus opportunity for informal support households face due to social exclusion. Indeed, 33 per cent of households are not associated with any community organization, while similarly 30 per cent state they cannot count on informal help from their social network. Still, only 5 per cent have a low quality social network based on trust of community members. This shows that while trust appears particularly high at the local level, a fair amount of households have limited contact to others outside their immediate family making them less aware of their surroundings and giving them less sources of informal support to lean on when times are bad.

Finally, deprivation along Dimension 4: Loss in Access outlines the under-utilization of fundamental social services necessary for a healthy socio-economic environment. Within our sample, 91 per cent of households do not use any formal financial service including a bank, money transfer operator or micro-finance institution, while 31 per cent have at least one child aged 6-14 not attending school. On the other hand, only 10 per cent of households do not utilize

any health services including a health clinic or hospital. While unsurprising given the context, these figures indicate many households in Afghanistan still overwhelmingly rely on informal sources of finance including the hawala system, limiting their opportunities to take advantage of certain beneficial financial services like savings accounts or micro-credit which may help hedge against future income shocks. Moreover, the nearly one-third of households failing to send all children to school despite their being located in the community limits future labour to low-skill activities.

Beyond simple looking at the total deprivation along individual indicators, we also notice key differences when cross-tabulating with migration intentions of at least one household member. Table 5 summarizes those variables which have a statistically significant p-value at least at the 5 per cent level.

TABLE 5: Statistically Significant Mean Difference across Migration Intentions

Negative Relationship	Positive Relationship
Food insecurity	Less than 2 sources of income
Poor sanitation	No ownership of land
Unreliability of fuel	No ownership of livestock
Low education of HH head	
Low availability of HH members for employment	
No membership in comm. orgs.	
No use of school	
No use of formal financial institutions	

Tellingly, most variables show deprivation being associated with a lower probability of concrete plans to move abroad, while only a few are positively related. Even though Table 5 shows crude associations, it gives a general idea of how individual indicators of deprivation relate to whether a household has a member with intentions to migrate, and will be dealt with in more detail with the regression analysis.

Further along, Table 6 presents household vulnerability for each dimension using the earlier explained 33 per cent cut-off, meaning a household is classified as dimensionally vulnerable if deprived in more than a third of all equally weighted indicators within that particular dimension.

TABLE6: Dimensional Household Vulnerability (%)

	Migration Intentions			
	No	Yes	**Total**	p-value
Dimension 1: Loss in Human Security	37.23	32.56	**36.42**	*
Dimension 2: Loss in Exchange Freedom	70.29	71.06	**70.42**	
Dimension 3: Loss in Social Capital	13.98	6.61	**12.70**	***
Dimension 4: Loss in Access	37.67	21.97	**35.00**	***

Significance Levels: ***p<0.01, **p<.05, *p<0.10.

Focusing on the totals column, we notice household vulnerability is most extreme for Dimension 2: Loss in Exchange Freedom, as 70 per cent of our sample is categorized as such. Moreover, vulnerability along Dimension 1: Loss in Human Security and Dimension 2: Loss in Access is similar at 36 per cent and 35 per cent respectively, while only 13 per cent of households are categorized as vulnerable within Dimension 3: Loss in Social Capital. Looking at the mean difference across migration intentions, we find the relationship is negative and statistically significant, at least at the 1 per cent level, for all dimensions apart from the second.

Lastly, Table 7 presents the multi-dimensional vulnerability index along with a measure of degree. Here we find that 71 per cent of our sample is categorized as multi-dimensionally vulnerable, meaning they are deprived in over a third of all indicators, relatively weighted, across dimensions. Of that amount, 16 per cent are considered "very vulnerable" meaning they are deprived in over half of all indicators. Moreover, the mean difference across migration intentions is negative and statistically significant for all measures.

TABLE 7: Multi-dimensional Household Vulnerability (%)

	Migration Intentions			
	No	Yes	**Total**	p-value
Multi-dimensional Vulnerability Index	**73.40**	**57.23**	**70.64**	***
Less Vulnerable	56.25	48.87	**54.99**	**
Very Vulnerable	17.14	8.36	**15.64**	***

Significance Levels: ***p<0.01, **p<.05, *p<0.10.

Regression Analysis

In light of the household profile, we here provide estimates of the probit model to empirically measure the influence of individual indicators of deprivation as well as both dimensional and multi-dimensional vulnerability on migration intentions. Because coefficients of the probit model are inherently problematic to interpret, we report the marginal effect along with the t-statistic.

Moreover as stated prior, all regressions are controlled for by province, district type, ethnicity, whether the household has a current migrant abroad, whether the household has a return migrant present and household size and estimated using robust standard errors.

Table 8 presents our results regarding the influence of individual indicators of deprivation on migration intentions, initially grouped by each dimension separately before a full model. Supporting the earlier mean difference test, we find little evidence of deprivation leading to a higher probability of intention to migrate. Of the few coefficients with a positive sign, only "Quality of Networks" is statistically significant and only then in the full model. Intuitively, this gives slight suggestion that the lower level of trust one has for members of the community, the more likely a household member intends to migrate.

On the contrary, a number of coefficients have a negative sign indicating again that deprivation leads to a lower likelihood of having a household member with concrete plans to migrate abroad. Of those which are statistically significant across both the dimensional and full models, "Education of Household Head" and "Membership in Community Organization" explicitly relate to human and social capital respectively, suggesting that a less educated individual with a smaller social network is less aware of the potential opportunities outside their current location or less capable to make the costly journey, leading to lower aspirations. This robust finding is supported by the fact that "Use of School" and "Help from Social Networks", both also related to human and social capital respectively, are likewise negative and statistically significant within their respective dimensional models, even though they lose significance in the full model. Furthermore, household deprivation in terms of "Sanitation" and "Use of Financial Services" are also robustly statistically significant across models, indicating a household with a worse general state of affairs is less likely to have a member planning to move. This is supported by the statistical significance of "Food Security" and "Household Savings", however in the full model only.

TABLE 8: Marginal Effect of Indicators of Deprivation on Migration Intentions

	(1) Dim 1		(2) Dim 2		(3) Dim 3		(4) Dim 4		(5) Full	
	Marg. Eff.	*t-stat*	*Marg. Eff.*	*t-stat*	*Marg. Eff.*	*t-stat*	*Marg. Eff.*	*t-stat*	*Marg. Eff.*	*t-stat*
Avg. Annual Income per capita	-0.03	-1.38							-0.02	-0.95
Number of Income Sources	0.00	0.21							0.01	0.32
Food Security	-0.03	-1.92							-0.05**	-2.82
Frequency of Income	0.05	1.27							0.03	0.82
Household Savings	-0.04	-1.80							-0.08**	-2.73
Condition of the House	-0.00	-0.00							-0.01	-0.24
Sanitation	-0.10**	-2.85							-0.08*	-2.47
Source of Water	0.01	0.20							-0.00	-0.18
Reliability of Fuel	-0.05*	-2.57							-0.03	-1.65
Education of HH Head			-0.10***	-5.67					-0.07***	-4.17
Number of Able-Bodied			-0.01	-0.64					0.00	0.10
Ownership of House			-0.00	-0.14					-0.00	-0.06
Ownership of Land			0.02	0.95					0.03	1.21
Ownership of Livestock			0.00	0.09					-0.01	-0.56
Number of Employed			-0.01	-0.53					-0.00	-0.19
Membership in Comm. Org.					-0.11***	-6.03			-0.12***	-5.83
Help from Social Networks					-0.01	-0.66			-0.06**	-3.19
Quality of Social Networks					0.06	1.67			0.07*	2.02
Use of School							-0.05**	-2.63	-0.03	-1.77
Use of Health Services							0.03	0.98	0.01	0.19
Use of a Financial Services							-0.09**	-3.17	-0.06*	-2.06
Controls										
Province	Y		Y		Y		Y		Y	
District Type	Y		Y		Y		Y		Y	
Ethnicity	Y		Y		Y		Y		Y	
Migrant Household	Y		Y		Y		Y		Y	
Return Migrant Household	Y		Y		Y		Y		Y	
HH size	Y		Y		Y		Y		Y	
Adj. R-Squared	0.15		0.15		0.15		0.14		0.19	
N	1988		2005		2000		1843		1822	

Significance Levels: ***p<0.01, **p<.05, *p<0.10.

TABLE 9: Marginal Effect of Dimensional Vulnerability on Migration Intentions

	(1) Dim 1		(2) Dim 2		(3) Dim 3		(4) Dim 4		(5) Full	
	Marg. Eff.	*t-stat*	*Marg. Eff.*	*t-stat*	*Marg. Eff.*	*t-stat*	*Marg. Eff.*	*t-stat*	*Marg. Eff.*	*t-stat*
Dimension 1	-0.04*	-2.03							-0.04*	-2.29
Dimension 2			-0.02	-1.07					-0.01	-0.36
Dimension 3					-0.07**	-3.01			-0.09***	-3.54
Dimension 4							-0.04*	-2.21	-0.04*	-1.97
Controls										
Province	Y		Y		Y		Y		Y	
District Type	Y		Y		Y		Y		Y	
Ethnicity	Y		Y		Y		Y		Y	
Migrant Household	Y		Y		Y		Y		Y	
Return Migrant Household	Y		Y		Y		Y		Y	
HH size	Y		Y		Y		Y		Y	
Adj. R-Squared	0.13		0.13		0.14		0.13		0.14	
N	1988		2005		2000		1843		1822	

Significance Levels: ***p<0.01, **p<.05, *p<0.10.

TABLE 10: Marginal Effect of Multi-dimensional Vulnerability on Migration Intentions

	(1) MVI		(2) Degrees of MVI	
	Marg. Eff.	*t-stat*	*Marg. Eff.*	*t-stat*
Multi-dimensional Vulnerability Index	***-0.10******	***-5.26***		
Less Vulnerable			-0.09***	-4.71
Very Vulnerable			-0.10***	-4.31
Controls				
Province	Y		Y	
District Type	Y		Y	
Ethnicity	Y		Y	
Migrant Household	Y		Y	
Return Migrant Household	Y		Y	
HH size	Y		Y	
Adj. R-Squared	0.14		0.14	
N	1822		1822	

Significance Levels: ***p<0.01, **p<.05, *p<0.10.

Further along, Table 9 provides the results regarding the influence of dimensional vulnerability on migration intentions for each of the four dimensions, again initially reported separately before a full model. Consistent with our previous finding, we see that dimensional vulnerability has a negative marginal effect across all models with each statistically significant apart from Dimension 2. The negative effect for Dimension 3 is most pronounced at 9 per cent, providing further evidence that social capital is essential for aspirations to migrate. Likewise a household vulnerable within Dimensions 1 and 4 is on the margin 4 per cent less likely to have concrete plans to move abroad.

Finally, Table 10 presents the results regarding the influence of multi-dimensional vulnerability and its degree on migration intentions. In line with the prior findings, a household categorized as multi-dimensionally vulnerable is on the margin 10 per cent less likely to have a member with concrete plans to migrate, statistically significant at the 1 per cent level. What's more, the effect is slightly more pronounced for those household deemed "very vulnerable" in comparison to those households considered "less vulnerable", both statistically significant.

5. Conclusion

This analysis investigates whether household vulnerability influences the intentions to migrate within a particular context characterized by a high degree of instability. While it is commonplace to conceptualize migration as being driven by certain economic-related factors, it is reasonable to assume that in an insecure setting like Afghanistan the difference between voluntary and involuntary movement is not easily distinguishable, making it necessary to approach the subject through a broader spectrum. The use of household vulnerability as a measure which incorporates a range of socio-economic factors allows for a more comprehensive analysis which does not presuppose movement is economic in nature.

The empirical results of our analysis are in line with those hypotheses put forth by the new economics of labour migration. In particular it is not the "poorest of the poor", or more appropriately for our purposes the "most vulnerable of the vulnerable", who have concrete plans to migrate abroad. Indeed, a household categorized as multi-dimensionally vulnerable is on the margin 10 per cent less likely to have a member with intentions to move compared to non-

vulnerable households, with the negative marginal effect slightly larger for those households deemed “very vulnerable” in comparison to those deemed “less vulnerable”. Given the inherent costs and risks in leaving one’s home, it appears Afghan households have a realistic understanding about their capabilities to actually migrate, ultimately shaping their expectations and aspirations. On a macro-level, this result likewise offers support to the “migration hump” theory in which socio-economic development leads to increased movement, at least in the medium-term.

Concerning those specific vulnerability-related factors associated with intentions to migrate, our results shows that a household suffering from deprivation along a variety of individual indicators related in particular to human and social capital, but also to a more general state of affairs, is less likely to have a member with concrete plans to move. Those households for example with low education of the household head as well as no membership in a community organization are noticeable prone to be less likely in having a member intend to migrate. Likewise, certain indicators implying a general impoverished state of affairs including low sanitation as well as no use of formal financial services are also associated with a lower probability that a member has concrete plans to move abroad.

While our results are revealing, it is important to note that this analysis is not without its limitations. Most evident, the use of intentions is a less-than-perfect proxy for actual behaviour. Even though a number of studies on the topic have suggested migration intentions are to a certain extent a good predictor of future migration behaviour, the use of actual migration behaviour is preferred. Still, even though the lack of robust data on actual migration behaviour in our own sample makes any such analysis problematic, the use of intentions has the benefit of circumventing the serious issue of endogeneity between vulnerability and migration, something which must be faced head-on when using data for actual behaviour. Secondly, the construction of dimensional and multi-dimensional indices includes with it many discretionary choices regarding indicators, thresholds and cut-offs. In this regard, our decisions were foremost driven by the literature as well as by the particular context in question and data availability. In this way, we hope to have minimized any biases which are bound to arise when constructing an index of this sort.

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Annex 1: Description of Thresholds for Individual Indicators of Household Deprivation

Dimension	Variable	Household is deprived if…
Dimension 1: Loss in Human Security	*Internal: Lack of Entitlements*	
	-Average annual income per capita	…below the $1.25/day poverty line
	-Number of income sources	…less than 2 sources
	-Food security	…problems securing food once every few months or more
	-Savings	…does not save
	External: Exposure to Risk	
	-Frequency of income received	…income not received every month of the last year
	-Condition of house	…construction material of the floor is dirt, sand, dung or cane
	-Type of sanitation	…no toilet or toilet is a shared pit/latrine or pan/bucket
	-Source of water	…source of water is a river, lake, pond, or stream
	-Reliability of fuel for cooking	…main source of fuel is wood, straw/shrubs/grass or animal dung
Dimension 2: Loss in Exchange Freedom	*Internal: Lack of Entitlements*	
	-Educational attainment of household head	…educational level of the household head is less than secondary
	-Number of households members available to work	…less than the sample mean, 0.56
	-Ownership of house	…no ownership of house
	-Ownership of land	…no ownership of land
	-Ownership of livestock	…no ownership of livestock
	External: Exposure to Risk	
	-Number of able-bodied households members employed	…less than the sample mean, 0.40
Dimension 3: Loss in Social Capital	*Internal: Lack of Entitlements*	
	-Membership in community organizations	…no household member has membership in any community organization
	-Help from social networks	…cannot count on informal arrangements for help
	External: Exposure to Risk	
	-Quality of social networks	…trust of people in the neighbourhood is low
Dimension 4: Loss in Access	*Internal: Lack of Entitlements*	
	-Use of school	…a child aged 6-14 does not attend school
	-Use of health services	…no household member uses the health clinic or hospital
	-Use of financial services	…no household member uses a financial institution (bank, money transfer operator or micro-finance institution)

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